Distinguished Lecture Series

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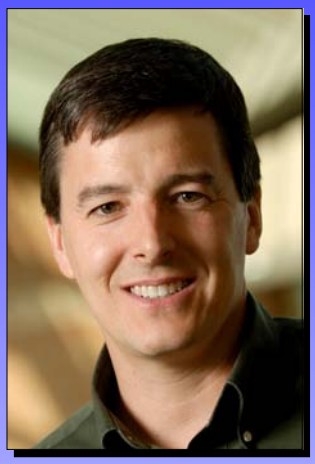

Tubes, Ribbons and Wires for Flexible Electronics

Solution processable conductors, dielectrics and semiconductors represent enabling materials for electronic circuits that can be fabricated on plastic sheets by continuous, high speed printing techniques. It is generally believed that these types of systems, which can cover large areas, will be important for new applications in consumer electronics. This talk describes the operational aspects of flexible transistors and circuits that use printable semiconductors based on carbon nanotubes, and on ribbons and wires of single crystal silicon, gallium arsenide, indium phosphide and gallium nitride. High mobilities, optical transparency, GHz switching speeds and mechanical bendability and even stretchability represent a few of the unusual characteristics that can be achieved. These and other aspects, including the soft lithographic printing techniques used to form the devices patterning methods will be discussed.

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11 AM, Building 224, Room B-245
http://polymers.nist.gov/distinguished
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